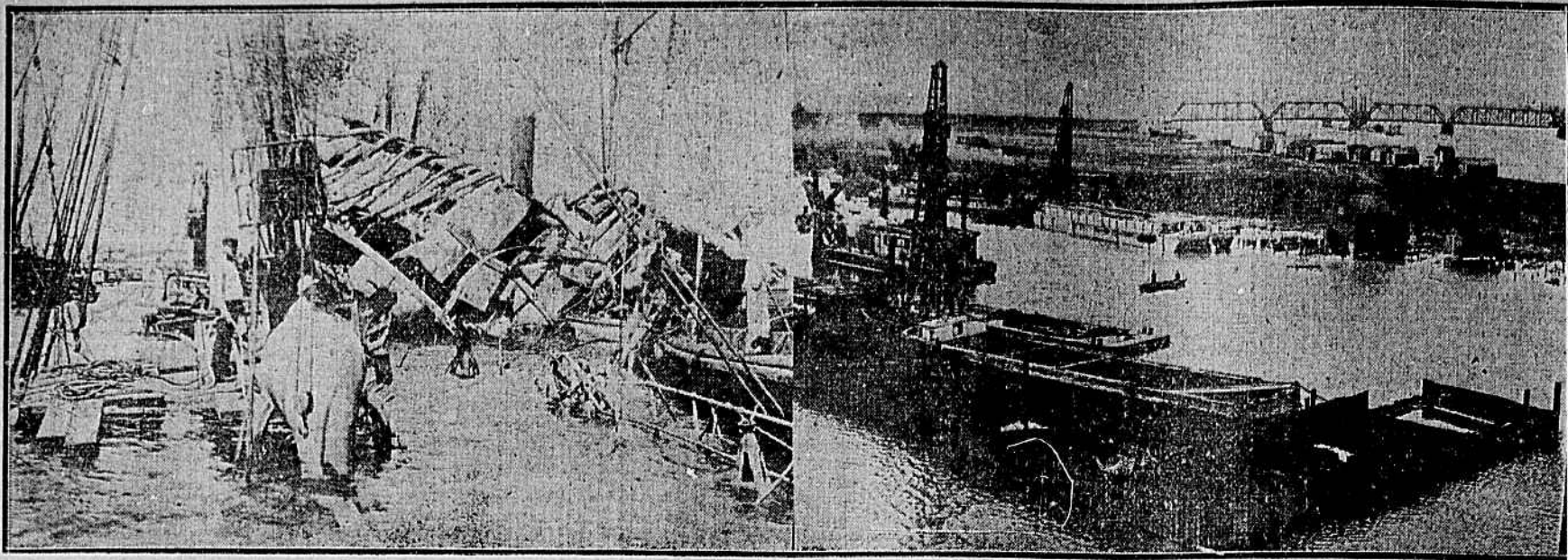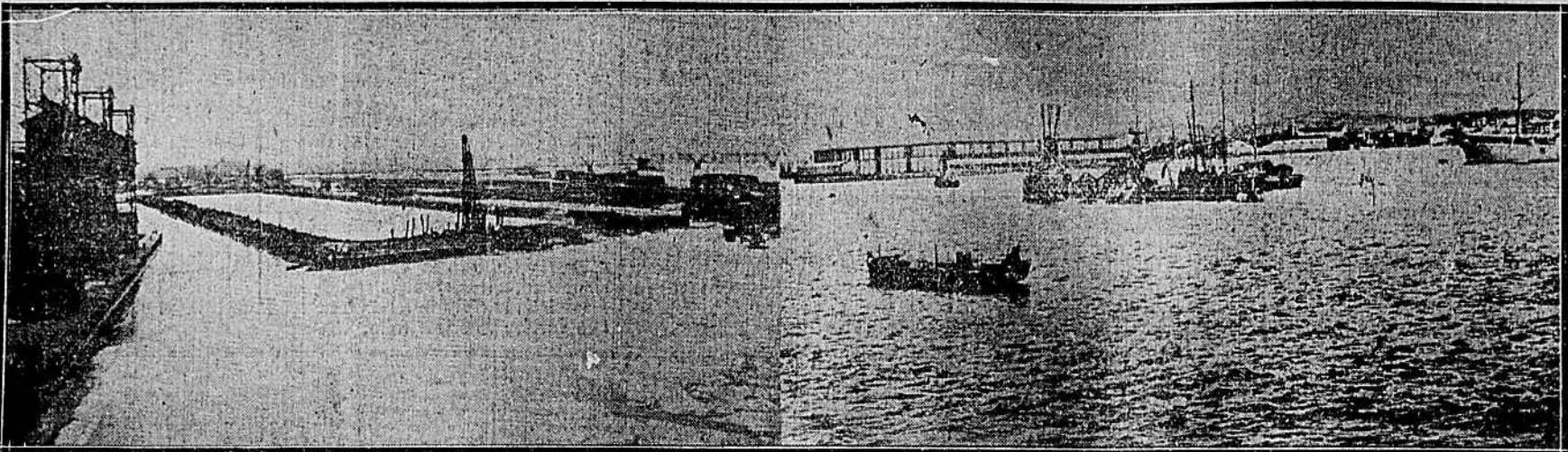# Maine to Be Dug Out Whole---Water-Tight Fence of Steel to Be Built Around Vessel---Finally Will Be Given Deep Sea Burial

VIEW OF WRECK OF MAINE FROM AFT.

BUILDING A STEEL COFFER DAM.
Maine's will be of same type except that "pockets" will be circular instead of square. Driving the steel pilings.

A WATER-TIGHT FENCE OF STEEL. ONE OF THE NEW STEEL COFFER DAMS.

WRECK OF THE MAINE. "DEAD BOAT" IN THE FOREGROUND.

GENERAL WILLIAM H. BIXBY.

BY JOHN ELFRETH WATKINS.
Washington, D. C.

The grim skeleton that long has lain at Uncle Sam's poster gate is at last to be disinterred and searched for the long-sought clue to the blackest maritime mystery that ever vexed the world. The undertaker has been picked and is all ready to ply his spade. Ere long the coroner will be sitting upon the crumbled bones and then—lest they might rattle again in some neighbor's closet—they will be consigned for all eternity to the lethean depths.

"Excuse me, sir, but I have to inform you that the ship is blown up and is sinking."

Nearly thirteen years have ground by since that mid-February night when "Brave Bill" Anthony, with uncanny adherence to discipline, stepped into his captain's cabin, cracked his heels together, struck his visor with his white-gloved hand and thus announced the explosion of the battleship Maine. Meanwhile the lion-hearted private of marines has gone to a suicide's grave, and a hundred inventive geniuses, ambitious to recover the wreck on a salary or percentage basis, have presented themselves to the President. This was General William H. Bixby, the army's new chief of engineers, who promptly obtained the Taft favor, and it was another case where simplicity won.

Interesting Schemes Considered.

One proposition has been to calk the hull and pump it full of air; another to fill it with paraffined cork and thus float it. Other contractors have proposed to sink big dry docks on either side of the wreck, connect them with chains passed under the submerged keel, and, by pumping them out, lift the Maine high enough for another dry dock to slip in underneath and scoop her up. Still other engineers and contractors have presented plans for blowing up the battleship and recovering the fragments.

A Gigantic Cofferdam.

A water-tight fence is to be built about the Maine. Then the sea water inside the wreck is to be pumped out, leaving the wreck high and dry within. That is the scheme which has been sealed with the Taft favor, and General Bixby has just given me an hour during which he explained the details of the work, which is to begin at once.

This water-tight fence, or cofferdam, will be 450 feet long by 200 feet wide, and the area of dry harbor bottom within will be over three acres in extent, when the pumping is completed. In the middle of this space will rest the Maine with a clearance of at least fifty feet all around.

This wall will be built of successive circles of steel pilings of ingenious design, a little over a foot broad, a half-inch thick in the centre and sixty feet long. They will be driven into the harbor bottom to a depth of fifteen feet, which means that when pumped out the great steel fence will be over forty-five feet high, or about as tall as a three-story house.

To make them water-tight the steel pilings have a unique interlocking feature. Viewed endwise—i. e., seen in cross-section—each of them looks like a long, slim wrist terminating at either end in a half-closed hand, with thumb bent and the line of the fingers curved. So, if you were to look down upon the cofferdam its top edge would look like an endless chain of hands, each clasping the other. These interlocking joints are self-calking and render the steel wall water tight no matter whether they are set to describe a straight line, a curve or an angle. They need no rivets, screws or bolts and as soon as one has been driven fifteen feet into the harbor bottom the near edge of the bottom of its neighbor will be fitted into the adjacent groove at its top and dropped. Then the pile-driver will do its work. And after the Maine has been recovered the pilings will be pulled out one at a time and, very probably, sold back to the rolling firm which is supplying them.

Once More on Her Keel.

The water inside the big cofferdam, before pumping, will average about thirty-five feet in depth and there will be altogether about 4,725,000 cubic feet of water to be pumped out. After this water has been sucked up the wreck will be braced all around and the portion of the hull that is found buried in the mud will be uncovered with shovels and will be unwatered with shovels and water jets, new bracing being continually added all the while, until finally the rusted and battered man-of-war, redeemed from more than a dozen years' erasure of silt and mud, sits high and dry upon her keel as she would be in drydock. Afterward the entire bottom of the cofferdam will be dry and explored for fragments of the wreckage lying alongside her.

Not until the other day did the right man with the right scheme present himself to the President. This was General William H. Bixby, the army's new chief of engineers, who promptly obtained the Taft favor, and it was another case where simplicity won.

government already had the services of General Bixby, who is recognized as the most distinguished waterway engineer of this country.

Indeed, for this branch of engineering the government especially trained him at the beginning of his career, for as a reward for his graduating at West Point at the head of his class he was sent to France and given a post-graduate course in the National School of Bridges, Highways, River and Harbor Improvement. He has been president of the Mississippi River commission for several years, and it was he who had charge of all that great harbor and channel improvements on the great lakes between Buffalo and Duluth, including the channel connecting Lakes Huron and Superior, and the great Sault Ste. Marie Lock.

He has also had charge of the improvements of the entire Ohio River, as well as the upper Mississippi, and last year he was assigned as special advisory engineer to the National Waterways Commission. In working out the scheme for the recovery of the Maine he has been advised by a board of three engineer officers, Colonel W. M. Black Lieutenant-Colonel M. M. Patrick and Captain H. B. Ferguson, the last named among whom will have direct charge of the work in Havana.

To Seek Bones of Seventy-five Entrapped Men.

Recovery of the bones of the victims still in the wreck will be a gruesome function of the corps of men at work in the cofferdam. The total complement of the Maine was 355 officers and men, of whom 253 were killed or drowned on the night of the explosion and seven more died afterwards in the hospital, making a total of 260 victims. Altogether 178 bodies were recovered from the ship and the surrounding waters, but seventy-five corpses were never found. How many of these went down inside the hull and how many floated out to sea nobody knows. The work of caring for such of the remains as are found within the compartments of the wreck will probably be supervised by a naval chaplain, who will save every article which might aid in identification.

The skeletons recovered will be placed in caskets and borne aboard a naval vessel to the Arlington National Cemetery, opposite Washington, where the Maine's military mast will be erected as the crowning feature of a memorial monument to be dedicated to all of the victims of the tragedy of February 15, 1898.

Cut in Two and Floated.

The wreck will be floated after it has been examined by the Spanish, Cuban and American representatives, but this cannot be effected until the badly damaged portion of the bow has been cut off. This having been accomplished, a water-tight bulkhead of timber will be built across the front of the hull. This cutting of the ship in two is a simple matter, General Bixby tells me. Two or three years ago a big vessel built up on the lakes had to be taken out to sea, but was found to be too long to go throug the locks of the Welland Canal leading from Lake Erie into Lake Ontario. So the owners placed her in drydock, cut her in two, put a bulkhead in each open end and towed the halves, separately, out to the St. Laurence, where she was again put in drydock agin and riveted together.

The three-acre cofferdam about the Maine will serve as a drydock for this purpose, and after the big bulkhead has been put in place the doors in her compartments will be closed. Finally all of her leaks will be calked.

Spain Invited to Watch Work.

Spain has been invited to send to Havana a representative, who will be given access to the Maine as soon as the cofferdam has been unwatered, and a similar invitation has been sent to Cuba. The international aspect of the undertaking was one cause which moved the President to intrust the delicate task to the army engineers, rather than to contractors. Economy was another consideration, for Cuba already offered our government the storage yard dock front, steam hoisters, dredges, pile-drivers and pumping apparatus needed for the work, and these have since been accepted. Moreover, the

and after the wreckers have gathered up all of the bow fragments the water will be run back into the cofferdam. Then what remains of the old Maine will rise again to the bosom of the sea and the steel pickets of the great fence will be pulled up.

Towed to Sea and Sunk.

The final disposal of the wreck will be determined by Congress soon after it convenes. Various offers have been received from interests desirous of exhibiting the recovered hull as a whole or in fragments, and one application has been made by a concern offering the government one-half the gate receipts if allowed to make a show of the recovered parts. From past debates in Congress General Bixby assumes that any public exhibition of the wreck would be offensive to the better element of the American public, and that Congress will prefer that the Maine be given a deep-sea burial and be thereby disposed of beyond resurrection," as he put it.

If this burial at sea is decided upon the body of the dead leviathan will be allowed to descend gently into slime deep above far below the reach of passing keels. The bursting of her ascending bubbles will then be man's last visible reminder of our worst tragedy of the sea, and only the monsters of the shadowy realm below the waves will witness the gradual dissolution of the one-time majestic warrior.

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